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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/077,215	02/15/2002	Norman Szalony	10541-1273	3067

29074 7590 01/12/2005

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EXAMINER	
TO, TOAN C	

ART UNIT	PAPER NUMBER
3616	

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/077,215	SZALONY ET AL.	
	Examiner	Art Unit	
	Toan C To	3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *September 28, 2004* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *3-6 and 9-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3-6 and 9-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Arguments

1. In view of the Appeal Brief filed on September 28, 2004, PROSECUTION IS HEREBY REOPENED. An Action set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 3, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fletcher et al (U.S. 5,903,965) in view of Biltgen et al (U.S. 5,549,764).

Fletcher et al discloses a shaft to transfer torque in a vehicle with the following: a first member (22) having internal splines (22b); a second member (24) having external

splines (24b) engagable with the internal splines (22b) to allow telescopic movement between the first member (22) and the second member (24) and to transfer torque between the first member and the second member; the external splines (24b) having a coating applied to a surface of the external splines (see column 4, lines 9-10) to reduce friction during the telescopic movement; wherein the coating is nylon (see column 4, lines 9-10).

Fletcher et al does not directly disclose the invention wherein the surface of the external splines is an isotropic surface finish with a thin layer of coating on top of the surface.

Biltgen et al teaches the invention wherein the surface is an isotropic surface finish with a thin layer of coating on top of the surface, wherein the coating measures less than approximately 10 microns thick (see column 6, lines 61-67).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the shaft of Fletcher et al by using teaching of Biltgen et al to provide isotropic surface finish for the external splines of Fletcher et al then applying coating on top of the isotropic surface finish in order to reduce friction and improve service life of the shaft.

4. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fletcher et al (U.S. 5,903,965) and Biltgen et al (U.S. 5,549,764) and further in view of Japan Publication (JP401305196A).

The combination of Fletcher et al and Biltgen et al discloses every element of the invention as discussed above except that the coating is tungsten disulfide.

Japan Publication (JP401305196A) teaches the invention wherein the coating is tungsten disulfide to reduce friction.

It would have been obvious design choice to one having ordinary skill in the art at the time the invention was made to modify the combination of Fletcher et al and Biltgen et al by applying a very thin layer of tungsten disulfide as taught by Japan Publication (JP401305196A) on top of the isotropic surface finish as taught by Biltgen et al in order to reduce friction such that improving service life of the shaft.

5. Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over McClanahan (U.S. 5,720,102) and Biltgen (U.S. 5,549,764) and further in view of Lawrence (U.S. 2,163,981).

McClanahan discloses a shaft to transfer torque in a vehicle with the following: a first member (14) having internal splines (26); a second member (12) having external splines (24) engagable with the internal splines (26) to allow telescopic movement between the first member (14) and the second member (12) and to transfer torque between the first member and the second member; the external splines (24) having a coating (30) to reduce friction during the telescopic movement; wherein the first member (14) and the second member (12) are made by steel (see column 3, line 40); wherein the coating is nylon (see column 4, line 12).

McClanahan does not directly disclose the invention wherein the surface of the external splines is an isotropic surface finish with the thin layer of coating on top of the surface.

Biltgen et al teaches the invention wherein the surface is an isotropic surface finish with a thin layer of coating on top of the surface, wherein the coating measures less than approximately 10 microns thick (see column 6, lines 61-62).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the shaft of Fletcher et al by using teaching of Biltgen et al to provide isotropic surface finish for the external splines of Fletcher et al then applying coating on top of the isotropic surface finish in order to reduce friction and improve service life of the shaft.

McClanhan does not directly discloses the shaft to transfer torque for use in the vehicle having a power distribution device and a suspension including a biasing device to support the vehicle on the wheel and to absorb road imperfection.

Lawrence teaches a suspension system for a vehicle having a wheel and a power distribution device (6) with the following: a biasing device (34) to support the vehicle on the wheel and to absorb road imperfections; a shaft (8) to transfer torque from the power distribution device (6) to the wheel; the shaft including a first member (12) having internal splines; a second member (13) having external splines engagable with the internal splines to allow telescopic movement between the first member and the second member and to transfer torque between the first member and the second member; wherein the first and second member adapted to couple with the power distribution device and one of the first and second member is adapted to couple with the wheel, a first universal joint (10) coupling the shaft and the power distribution device (6), a second universal joint (11) coupling the shaft and the wheel.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention by incorporating the shaft transfer torque as disclosed and taught by the combination of McClanhan and Biltgen et al into the vehicle suspension as taught by Lawrence in order to improve service life and performance of the vehicle.

6. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over McClanahan (U.S. 5,720,102) and Biltgen (U.S. 5,549,764) and in view of Lawrence (U.S. 2,163,981) and further in view of Japan Publication (JP401305196A).

The combination of McClanhan, Biltgen and Lawrence teach every element of the invention as discussed above but fail to teach a shaft transfer torque for the vehicle, wherein the coating is tungsten disulfide.

Japan Publication (JP401305196A) teaches the invention wherein the coating is tungsten disulfide to reduce friction.

It would have been obvious design choice to one having ordinary skill in the art at the time the invention was made to modify the combination of McClanhan and Biltgen et al by applying a very thin layer of tungsten disulfide as taught by Japan Publication (JP401305196A) on top of the isotropic surface finish as taught by Biltgen et al in order to reduce friction such that improving service life of the shaft.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan C To whose telephone number is (703) 306-5951. The examiner can normally be reached on Mon-Fri (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on (703) 308-2089. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTo
January 7, 2005

1/10/05

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